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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/265,432	03/10/1999	AKIHIRO TERADA	392.1627/JDH	4506
21171	7590	04/07/2004	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			NGUYEN, THU V	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/265,432

Applicant(s)

TERADA ET AL.

Examiner

Thu Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-9 and 11-19 is/are pending in the application.
- 4a) Of the above claim(s) 3-9 and 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,9 and 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

The preliminary amendment filed on January 9, 2004 has been entered. By this amendment, claims 2, 10 have been canceled, claims 17-19 have been added, claims 3-9, 11-16 are withdrawn from consideration, and claims 1, 3-9, 11-19 are now pending in the application.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (US 4,507,042) in view of Gerhard et al (EP 0296 422 A2).

As per claim 1, Suzuki teaches a robot system comprising: a movable arm with a plurality of links 12-13 (fig.1) and a wrist 14 (fig.1); and a tool unit 2 (fig.1) mounted on the wrist having an effecting end biased with a radial offset with the final rotational axis of the wrist (col.1, lines 56-63). Suzuki does not teach that the arm is controlled by a robot controller and the effecting end is a cutting end. However, Gerhard teaches controlling movement of the robot arm using controller (col.6, lines 36-53). Further, Gerhard teaches using robot arm for cutting and welding would have been known (col.1, lines 29-45). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the controller and the known

cutting tool of Gerhard to the robot arm of Suzuki in order to facilitate moving the cutting tool around the object being cut.

As per claim 17, refer to claim 1 above. Further, since the tool 2 (fig.2) is bias with respect to the final rotation axis, when the tool 2 is replaced with the cutting tool of Gerhard, the tool would be able to perform work at a location which is bias with respect to the final axis.

As per claim 18-19, refer to claim 1 above. Further, Suzuki teaches the L shaped member 15 (fig.1).

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (US 4,507,042) in view of Gerhard et al (EP 0296 422) and further in view of Thones et al (US 4,755,232).

As per claim 9, Suzuki teaches a robot arm 11-13 (fig.1) including a plurality of links and a wrist 14 (fig.1) connecting to an end effector 2 (fig.1) (col.1, lines 57-63). Suzuki does not teach that the end effector should be a cutting tool, controlling the robot with a soft ware, and arranging the work piece such that the central axis aligns with the final rotational axis of the wrist and rotating the rotational axis to perform cutting of the machine. However, Gerhard teaches controlling the robot with a software program (col.6, lines 36-53). Further, Thones teaches using a cutting tool, and arranging the work piece such that the rotational axis 22 (fig.1) aligns with the central axis of the work piece (fig.1) (col.3, lines 18-58). It would have been

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obvious to a person of ordinary skill in the art at the time the invention was made to use software program to control the robot of Suzuki as taught by Gerhard, and to replace the tool of Suzuki with the cutting tool of Thones and to arrange the work piece as taught by Thones for the robot of Suzuki in order to facilitate cutting hole on an object of certain shape according to the user input to a computer program.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1, and 9, 17-19 have been considered but are moot in view of the new grounds of rejection.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 305-7687, (for formal communications intended for entry)

**Or:**

(703) 305-7687 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451

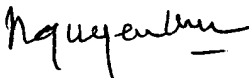
Crystal Drive, Arlington, VA., Seventh Floor (Receptionist).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner can normally be reached on Monday-Thursday from 8:00 am to 6:00 pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski, can be reached on (703) 308-3873. The fax phone number for this Group is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1111.

  
**THU V. NGUYEN**  
**PRIMARY EXAMINER**

March 26, 2004